Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the above-identified application.

Listing of Claims

1. (Previously Presented) In a RAID data storage system comprising a stripe, wherein the stripe comprises stripe units $B_1 - B_{max}$, a method comprising:

receiving a request to read data from stripe unit B_x, wherein B_x is one of stripe units $B_1 - B_{max}$, wherein the request is received from a computer system in data communication with the RAID data storage system;

reading stripe parity P corresponding to stripe units $B_1 - B_{max}$ in response to receiving the request;

generating new stripe parity P_{new} corresponding to stripe units $B_1 - B_{max}$ as a function of data of each of the stripe units $B_1 - B_{max}$;

comparing the new stripe parity P_{new} with the stripe parity P.

2. (Previously Presented) The method of claim 1 wherein the RAID data storage system comprises a parity RAID data storage system.

3. (Previously Presented) The method of claim 2 wherein the parity RAID data storage system comprises a RAID-5 data storage system.

4. (Previously Presented) The method of claim 1 further comprising returning stripe unit B_x data to the computer system if the stripe parity P compares equally to the new stripe parity P_{new}.

5. (Previously Presented) The method of claim 1 further comprising:

if stripe parity P does not compare equally to new stripe parity P_{new}:

reading checksum CS data from memory, wherein the checksum CS data corresponds to stripe units $B_1 - B_{max}$;

(a) generating new data for stripe unit B_y, one of the stripe units B_1 - B_{max} as a function of checksum CS data and data of stripe units B_1 - B_{max} other than stripe unit B_y;

(b) generating new checksum CS_{new} data as a function of the new data for stripe unit B_y and data of stripe units B_1 - B_{max} other than stripe unit B_y;

(c) comparing new checksum CS_{new} data with checksum CS data;

(d) overwriting data of stripe unit B_y with the new data of stripe unit B_y if new checksum CS_{new} data compares equally to checksum CS data.

6. (Previously Presented) The method of claim 5 further comprising changing the value of variable y and repeating (a) – (d) if new checksum CS_{new} data does not compare equally with checksum CS data.

7. (Previously Presented) A computer readable medium storing instructions executable by a first computer system in a RAID data storage system, wherein the RAID data storage system comprises a stripe, wherein the stripe comprises stripe units $B_1 - B_{max}$, wherein the first computer system performs a method in response to executing instructions stored on the computer readable medium, the method comprising:

reading stripe parity P corresponding to stripe units $B_1 - B_{max}$ in response to receiving a request to read data from stripe unit B_x, wherein B_x is one of $B_1 - B_{max}$, wherein the request is received from a second computer system in data communication with the first computer system;

generating new stripe priority P_{new} corresponding to stripe units $B_1 - B_{max}$ as a function of data of each of the stripe units $B_1 - B_{max}$;

comparing the new stripe parity P_{new} with the stripe parity P.

8. (Previously Presented) The computer readable medium of claim 7 wherein the RAID data storage system comprises a parity RAID data storage system.

9. (Previously Presented) The computer readable medium of claim 8 wherein the parity RAID data storage system comprises a RAID-5 data storage system.

10. (Currently Amended) The computer readable medium of claim 7 wherein the method further comprises returning stripe unit B_x data to the second computer system if the stripe parity P compares equally to the new stripe parity P_{new}.

11. (Previously Presented) The computer readable medium of claim 7, wherein the method further comprises:

if stripe parity P does not compare equally to new stripe parity P_{new}:

reading checksum CS data corresponding to stripe units $B_1 - B_{max}$;

(a) generating new data for B_y, one of the stripe units B_1 - B_{max}, as a function of checksum CS data and data of stripe units B_1 - B_{max} other than stripe unit B_y;

(b) generating new checksum CS_{new} data as a function of the new data for stripe unit B_y and data of stripe units B_1 - B_{max} other than stripe unit B_y;

(c) comparing new checksum CS_{new} data with checksum CS data;

(d) overwriting data of stripe unit B_y with the new data of stripe unit B_y if new checksum CS_{new} data compares equally to checksum CS data.

12. (Previously Presented) The computer readable medium of claim 11 wherein the method further comprises changing the value of y and repeating (a) – (d) if new checksum CS_{new} data does not compare equally with checksum CS data.

13. (Currently Amended) A data processing system comprising:

a RAID data storage system comprising a stripe, wherein the stripe comprises stripe units $B_1 - B_{max}$;

a first computer system for receiving a receiving a request to read data from stripe unit B_x, wherein B_x is one of $B_1 - B_{max}$, wherein the request is received from a second computer system in data communication with the first computer system, wherein the first computer system comprises a computer readable medium that stores instructions executable by the first computer system, wherein the first computer system performs a method in response to executing the stored instructions, the method comprising;

reading stripe parity P corresponding to stripe units $B_1 - B_{max}$ in response to receiving the request;

generating new stripe priority P_{new} corresponding to stripe units $B_1 - B_{max}$ as a function of data of each of the stripe units $B_1 - B_{max}$;

comparing the new stripe parity P_{new} with the stripe parity P;

returning stripe unit B_x data to the second computer system if the stripe parity P compares equally to the new stripe parity P_{new}.

14. – 15. (Cancelled)